



## STAR FIELDS

Newsletter of the  
Amateur Telescope Makers of Boston  
Including the Bond Astronomical Club  
Established in 1934  
In the Interest of Telescope Making & Using

Vol. 29, No. 11    December 2017

### This Month's Meeting . . .

Thursday, December 14<sup>th</sup>, 2017 at 8:00 PM  
Phillips Auditorium

Harvard-Smithsonian Center for Astrophysics

Parking at the CfA is allowed for the duration of the meeting

### Meteorites 101



Geminid meteor over the Clubhouse. December 13, 2014. \*

At our December monthly meeting, Peter Scherff will present "Meteorites 101: What they are, where they come from & how we find them". This is a talk on meteorites and impactites, what they are and what they tell us about the world we live in. Peter has traveled the world to find rocks that are "out of this world". He will have samples with him: meteorites from the Moon, meteorites that sent hundreds of people to the hospital, part of an asteroid that was found on an impact course with Earth, a piece of Mars, and many more meteorites. He will also be selling meteorite Christmas ornaments. The presentation will touch on the formation of the solar system, the composition of the Earth, and the role of asteroid impact on the Earth. If you have any rocks that you think might be a meteorite be sure to bring them. Peter will be happy to give his opinion on them.

Peter Scherff first started working with meteorites in the 1970's when he used meteorites to create "out-of-this-world" jewelry. Working this amazing material piqued his interest and he started studying meteorites to learn the science behind them. His studies have continued to this day. He prepares meteorites for study and/or display, makes thin sections for study, and etches iron meteorites to display their beautiful qualities. He has worked designing museum displays, selling and providing meteorites to both the public (universities, museums) as well as private collectors. He has also traveled the world hunting for extraterrestrial rocks. Peter is a member of the Meteoritical Society, the International Meteorite Collectors Organization, as well as local and national astronomy associations.

Please join us for a pre-meeting dinner discussion at House of Chang, 282 Concord Ave, Cambridge, MA at 6:00 pm before the meeting.

### President's Message . . .

December brings the close of another year. Arguably, the astronomical highlight of 2017 was August's Great American Eclipse. What celestial events will 2018 bring? To find out, I perused the "Sky Month by Month" section of the RASC Observer's Handbook 2018.

First the bad news. There will be 5 eclipses in 2018 – two total lunar and three partial solar. NONE will be visible from New England. The good news, especially if you're a Mars watcher, is that the Red Planet will have its most favorable opposition since the historic one of 2003. Around the time of opposition in late July, Mars will sport a disk over 24 arc-seconds across. The next opposition of this magnitude won't occur until 2035.

If you enjoy watching shadow transits of Jupiter's moons, 2018 promises a bounty of double shadow transits. A handful take place early in the year, but after Jupiter's May 9 opposition things get busy. From late July to early September, double shadow transits occur with rapid-fire frequency.

To me, one of the more intriguing sky events of 2018 is a close (extremely close!) conjunction of Venus and Uranus on the evening of March 28th. At their closest, the two planets will be separated by less than 10 arc-seconds! This planetary "double star" will be a challenge for two reasons. They will be very low in the western sky after sunset, and the glare from Venus, 10,000 times brighter than Uranus, will be overpowering.

If you've never seen an asteroid, Vesta makes an extremely favorable appearance in June. At the time of opposition on the 19th, this brightest of all asteroids reaches magnitude 5.3 - an easy target for binoculars and certainly within naked eye visibility from dark-sky locations.

For those of you who like to kick back in a lawn chair and enjoy meteor-watching, this year's Perseid shower, slated to peak on the evening of August 12-13, will take place under dark skies (a 2-day-old moon won't interfere).

I close with best wishes to you, family, and friends, for a joyous Holiday season. Merry Christmas, Happy Chanukah, and a cheerful, prosperous, and cloud-free New Year!

Clear Skies,

~ *Glenn Chaple – President* ~

## November Meeting Minutes . . .



(L-R) Tom Lepisto and Jean LeVaux \*

Summary of the November 9, 2017 ATMob meeting held at the Harvard-Smithsonian Center for Astrophysics. Club President Glenn Chaple called the meeting to order at 8:00 pm.

Eileen Myers distributed the 2018 edition of *The Royal Astronomical Society of Canada Observer's Handbook* (this year they made a U.S.A. edition) to club members who ordered copies. Eileen also had *Astronomy 2018 Calendars* for sale.

- Phil Levine read the Secretary's Report
- Eileen Myers presented the Treasurer's Report
- Chris Elledge presented the Membership Report
- Glenn Chaple presented the Observing Committee Report
- Steve Clougherty presented the Clubhouse Report
- Old Business and Updates:  
Eileen Myers informed the membership about a Star Party at the Butler School in Lowell on Wednesday, Nov. 15th. Members were encouraged to attend and bring scopes.
- New Business:  
Glenn asked the membership if ATMob ever had an official club pin. Paul Valelli indicated that years ago the club used to have a pin. Glenn polled the membership at the meeting to see if there was any interest in re-establishing a club pin. The result was favorable. This topic will be brought up at the next Board Meeting.
- Announcements:  
ATMob member Ed Los informed the membership that Alison Doane, former Curator of the Harvard Astronomical Glass Plate collection, passed away on October 29th.

Rich Nugent announced there will be a Mini Messier Marathon at the Westford Clubhouse on November 18th.

Bert Halstead announced that one of his photos of the 2017 total solar eclipse was used for a music CD album cover.

The guest speakers for the evening were Jean LeVaux (Howard LeVaux's wife) and Tom Lepisto. The presentation was entitled: "Howard LeVaux in Antarctica". Howard took part as an auroral physicist in an expedition to Antarctica as part of a scientific team during The International Geophysical Year (1957-1958).

Tom and Jean presented photos of Howard during the expedition in Antarctica, showing it to be a snowy, frozen, barren landscape. A peak on the east side of the crater rim of Mount Cumming is named LeVaux Peak in recognition of Howard's participation during that expedition. One of the photos showed Howard standing on the snow covered peak that now bears his name, at an elevation of 8497 feet,.

While in Antarctica Howard took part in an 1100 mile expedition to study the geology and map the region. Transportation for members of the expedition were by snowcat and cross country skies. Supplies for the expedition were transported by military aircraft and sometimes air dropped when landing conditions were too hazardous.

Photos showed some of the scientific equipment used during the expedition. These included all sky cameras and radar setups used to detect the Aurora Australis.

Other photos documented layers of ice, cut many feet deep beneath the surface, used for geological research.

<http://www.nas.edu/history/igy/antarctic.html>

[https://wikivisually.com/wiki/Le\\_Vaux\\_Peak](https://wikivisually.com/wiki/Le_Vaux_Peak)

<https://www.space.com/38271-aurora-videos-from-space-station-astronaut.html>

Refreshments for the evening were provided by Chris Elledge.

Glenn Chaple adjourned the meeting at 9:10 pm.

~ *Phil Levine - Secretary* ~

## Meeting Recordings . . .

The recording of ATMob meeting #903 is available on YouTube: [https://youtu.be/UZm04\\_WSxDk](https://youtu.be/UZm04_WSxDk)

I would like to thank Jean LeVaux and Tom Lepisto for allowing us to record their presentation.

This link is to the publicly available cut of the meeting recording. To view the original version of the meetings, please see the Announce Forum on the ATMob Website.

<http://www.atmob.org>

~ *Chris Elledge – Membership Secretary* ~

## Membership Report . . .

I am pleased to welcome our newest members: Anthony Davids; Tom Lepisto; Karen and Lilah Mercadante; Corey and Keira Mooney; Sankaranarayanan Ramaoorthy and Family.

As of November 26th, 2017 we have 290 memberships covering 357 members. This is broken down as follows:

- 152 Regular Members
- 95 Senior Members
- 7 Student Members
- 33 Family Memberships covering 100 Members
- 3 Guest Members

There are 79 memberships that expire December 1st.

Please contact me if you need any help with your membership or logging into the website.

~ Chris Elledge – Membership Secretary ~

## Clubhouse Report . . .



Working on the side porch. (L-R) Bill McHenry and Chris Elledge \*

### November 2017 Clubhouse Report

Our monthly work session was held at the Clubhouse in Westford on Saturday, November 4th. A total of 18 members helped accomplish a substantial amount of work.

Phil Rounseville expertly cleaned the corrector plates on all three of our Schmidt-Cassegrain telescopes (SCT): the new Meade 16", the ATMoB Research and Imaging Observatory 14", and the Clamshell 10". Phil also assessed the condition of the primary mirror coatings and felt that all three are in good condition at this time.

John Blomquist used aluminum stock to fabricate a holder to carry new counterweights for the 16-inch Meade telescope. John Maher personally bought a new dew shield for the Meade 16". He temporarily rigged a counterweight system and is planning to install a better system in the near future. John M. reports that this newly donated telescope has performed well. He plans to train a

limited number of members to operate this scope and eventually train additional members who would like to use this instrument in the future.

Dave Prowten rebuilt the telescope shed door and installed a rubber gasket to prevent water and snow from entering the shed. The roof was also repaired after leaks were discovered recently.

Thanks to Chris Elledge and Bill McHenry for their scraping and staining work on the side porch.

Paul Cicchetti and Al Takeda erected the snow fence poles.

Tom McDonagh, Steve Clougherty and Jim Gettys met earlier during the work session and outlined an update to the Clubhouse two person rule. Recommended changes will be made to the Executive Board in the near future.

Thanks to Mike Mattei and Ed Los for conducting the Saturday afternoon mirror making workshop.

Once again we are grateful to the lunch crew for their set up and clean up on this day.

Thanks to all who volunteered at the November work session: John Blomquist, Paul Cicchetti, Steve Clougherty, Chris Elledge, Jim Gettys, Ed Los, John Maher, Mike Mattei, Tom McDonagh, Bill McHenry, Eileen Myers, Rich Nugent, John Reed, Phil Rounseville, Art Swedlow, Al Takeda and Sai Vallabha.

The next scheduled work party will be held at the Clubhouse on Saturday, December 2.

**Important Notice:** Mirror making sessions will now take place on **Saturday afternoons beginning at 1:00 pm. Other times may be scheduled. Check your email on the ATMoB-ANNOUNCE list.**

~ Clubhouse Committee Chairs ~

~ Steve Clougherty, John Reed and Dave Prowten ~

Clubhouse Saturday Schedule		
December 2	<b>WORK PARTY # 12 NO DUTY **</b>	
December 9	Paul Cicchetti	Eric Johansson
December 16	Rich Nugent	John Reed
December 23	<b>Closed for Christmas</b>	
December 30	<b>WORK PARTY # 13 ** New Year's Eve Party Preparation</b>	
December 31	<b>New Year's Eve Party</b>	
January 6	<b>WORK PARTY # 1 ** Al Takeda</b>	
January 13	Steve Clougherty	Joe Henry

\*\* Closing time for the Clubhouse is determined by the work crew

<b>Clubhouse Evening Schedule</b>	
Friday Night Educational Videos	7:00 pm - 10:30 pm #
Saturday Afternoon Mirror Making	<b>1:00 pm - ##</b>
Saturday Night Observing	7:00 pm - ##
# Closing time is determined by the organizers	
## Closing time is determined by the "A" members on duty.	
Saturday afternoon mirror making schedules will be posted to the ATMOB-ANNOUNCE email.	
Note: The Clubhouse is closed on the 2nd Thursday of the month for our monthly meeting in Cambridge.	
Due to inclement weather conditions on Saturday evenings, the "A" members on duty may elect to close the Clubhouse. Please call the Clubhouse at (978) 692-8708 or check for messages posted to ATMOB-ANNOUNCE.	

## Sky Object of the Month . . .

**December 2017**

**Courtesy LVAS Observer's Challenge\*\*\***

NGC 925 – Barred Spiral Galaxy in Triangulum

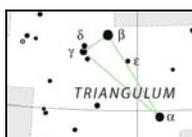
Mag. 10.0; Size 9.8' x 6.0'



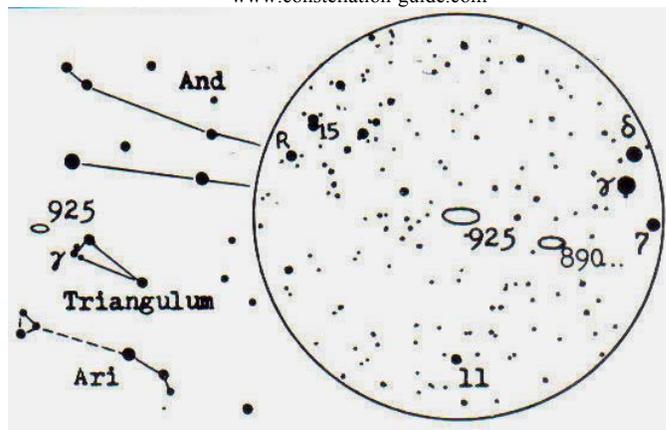
NGC 925. *Astronomy Magazine*

Our December LVAS Observer's Challenge is the barred spiral galaxy NGC 925, located 2 degrees east of the 4th magnitude star gamma ( $\gamma$ ) Trianguli. It was discovered by William Herschel on September 13, 1784, and bears the Herschel Catalog designation HIII 177 (the 177th entry in Class III [Very Faint Nebulae]). He described it in part as, "Very faint, considerably large, irregularly round."

Any Class III Herschel object would be a visual test for modest-sized scopes, and NGC 925 is no exception. It's apparently too challenging to have been included in the Astronomical League's Herschel 400 observing program. If you're able to glimpse this galaxy, can you detect the ESE to WNW orientation of the elongated core? At what aperture do the spiral arms become visible? Ideally, you'd want to check out NGC 925 from a dark sky location. If you live in an area with skies of average (mag 5) limiting magnitude, how well can you see it?



www.constellation-guide.com



Astro Cards chart by George R. Kepple

\*\*\*The purpose of the LVAS Observer's Challenge is to encourage the pursuit of visual observing. It is open to everyone who is interested, and if you are able to contribute notes, drawings, or photographs, the LVAS will be happy to include them in their monthly summary. If you would like to contribute material, submit your observing notes, sketches, and/or images to either [Roger Ivester \(rogerivester@me.com\)](mailto:rogerivester@me.com) or [Fred Rayworth \(fred@fredrayworth.com\)](mailto:fred@fredrayworth.com). To find out more, click on the following links: [LVAS Observer's Challenge past reports](#) and/or visit the [Las Vegas Astronomical Society website](#).

~ Glenn Chaple for the LVASS ~

## Mini Messier Marathons . . .

The weather was uncooperative for our attempt on October 21st to view about 40 Messier objects over the course of just 4 hours. Nonetheless, Joe Henry, Al Takeda, Andy Zucker and I managed to observe M 92, 13, 57, 56, 27 and 29 through gaps in the high, cirrus clouds overhead.

Another attempt was made on November 17th and this time nature cooperated. Maria Batista, Glenn Chapel, Corey Mooney, Andy Zucker and I participated. Glenn used a pair of binoculars while the rest of us used scopes with apertures of 8-12". With Glenn nearby I felt it necessary to add in a double star or two (Eta Cas and Almach) and when Joe Henry strolled over I found an obligatory carbon star (R Leporis). We compared it to one of Joe's favorite carbon stars...S Cephei. Begrudgingly, I had to admit that his star looked a bit redder than mine! By the end of the evening each of us had had a great time tracking down these deep-sky wonders. More of these events will be planned for the future and, hopefully, you'll consider joining us. In the meantime, keep observing!

~ Submitted by Rich Nugent ~

## For Sale . . .

- Televue 55mm plossl - \$175
- Many LARGE astronomy posters from Hansen Planetarium and Sky and Telescope. Most are laminated - \$5 each -- email for a list.



Image by Steve Mock

- 3 large super fast parabolic mirrors for spotlights, solar furnace, etc. - \$100.  
12.5", 16", 25.5" -- take all three for \$100



Image by Steve Mock

Email: [steve\\_mock@hotmail.com](mailto:steve_mock@hotmail.com)

~ Submitted by Steve Mock ~

## Eclipse Patches Available . . .



A shipment of 50 new 2017 Great American Eclipse patches has arrived in time for the Holiday Season. These are a reorder of the original NASA quality patch order made available by the host club, the Central Missouri Astronomical Association, to our ATMoB members who traveled to Columbia. The design was assisted by staff of the University of Missouri's Department of Physics & Astronomy, who also facilitated contact with those responsible for the mission patches worn by our Astronauts.

Patches are offered at cost, the same \$6 donation as for the earlier patch, and will be available at the Dec 14th meeting at Phillips Auditorium.

This patch would make a nice memento for a young person to remember their eclipse experience.

Happy Holidays!

For further info, contact John Reed at [mejreed58@gmail.com](mailto:mejreed58@gmail.com)

~ Clubhouse Committee Chair - John Reed ~

## New Year's Eve Party . . .

Sunday, December 31st, Start time 6:30 PM

2017 had us all worrying about where to go and what to do to see the August 21st Total Solar Eclipse. Was there anything astronomically more exciting than that in 2017? Come to a party on the last day of 2017 and let us know.

The eating and festivities will start at 6:30 PM Sunday evening, and will continue past midnight. Arrive at any time, since there will be 8 opportunities in all to shout "Happy New Year". Noisemakers and cheers will ring out each time the New Year crosses a time zone, starting with Greenwich Mean Time (7 PM local time), and continuing hour after hour through Eastern Standard Time (midnight local time), with a couple of half hour celebrations in between.

Stop by with your family and friends. No RSVP is needed.

Please bring something tasty to share. Entrée type dishes are always very welcome. Folks arrive and leave all evening and the party seems to start again with each new group. There will be plenty of non-alcoholic beverages.

The clubhouse will be warm and the party is on regardless of the weather. Don't forget your warm observing clothes and boots, and bring a telescope and camera if you like. The club's observatories will be open for observing too. January 1st will be a Full Moon - the Full Wolf Moon, so this will be the time to examine the beautiful ray systems. How many craters have prominent ray systems? And, since you can see them all, which lunar seas are lighter in color?

We will have line dancing led by Julie Kaufmann, and we are hoping to have live music again this year.

**Clubhouse vacuuming, setting up tables, and putting up decorations will take place at the Saturday, December 30th Work Party. Help is needed.**

Any party suggestions or questions are welcome, so please email them to Eileen at [starleen@charter.net](mailto:starleen@charter.net) or call at 978-501-6342 (day) or 978-456-3937 (evening).

For one set of directions to the ATMoB Clubhouse in Westford, see the last page of the ATMoB newsletter, or go to [www.atmob.org](http://www.atmob.org) and look for directions to the Clubhouse under About ATMoB. There are, of course, many other routes that may be shorter for you.

Please come and have fun and thank the members of the New Year's Eve Committee: Eileen Myers, Al Takeda, Julie Kaufmann, John Reed, and ...

*Editor: \* Photos by Al Takeda unless otherwise noted.*

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**January Star Fields DEADLINE**  
**Sunday, December 24<sup>th</sup>**

Email articles to Al Takeda at  
[newsletter@atmob.org](mailto:newsletter@atmob.org)

**Articles from members are always welcome.**

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**POSTMASTER NOTE:** First Class Postage Mailed December 10, 2017

Amateur Telescope Makers of Boston, Inc.  
c/o Chris Elledge, Membership Secretary  
99 College Ave  
Arlington, MA 02474  
**FIRST CLASS**

#### EXECUTIVE BOARD 2017-2018

PRESIDENT:	Glenn Chaple	(978) 597-8465
VICE PRES:	Tom McDonagh	(617) 966-5221
SECRETARY:	Phil Levine	(781) 956-6509
MEMBERSHIP:	Chris Elledge	(781) 325-3772
TREASURER:	Eileen Myers	(978) 456-3937
MEMBERS AT LARGE:	Bruce Tinkler	(781) 862-8040
	Al Takeda	(508) 494-7877
	Maria Batista	(617) 347-3730
PAST PRESIDENTS:		
2012 - 14	Mike Hill	(508) 485-0230
2010 - 12	Bernie Kosicki	(978) 263-2812
<b>COMMITTEES</b>		
CLUBHOUSE :	John Reed	(781) 861-8031
	Steve Clougherty	(781) 784-3024
	David Prowten	(978) 369-1596
OBSERVING:	Bruce Berger	(978) 387-4189
NEWSLETTER	Al Takeda	<a href="mailto:newsletter@atmob.org">newsletter@atmob.org</a>

#### PUBLIC OUTREACH

STAR PARTY COORDINATOR:  
Virginia Renehan [starparty@atmob.org](mailto:starparty@atmob.org)

## How to Find Us...

### Web Page [www.atmob.org](http://www.atmob.org)

**MEETINGS:** Held the second Thursday of each month (September to July) at 8:00PM in the Phillips Auditorium, Harvard-Smithsonian Center for Astrophysics, 60 Garden St., Cambridge MA. For INCLEMENT WEATHER CANCELLATION see [www.atmob.org](http://www.atmob.org) and check your email on the ATMOB-ANNOUNCE list.

**CLUBHOUSE:** Latitude 42° 36.5' N Longitude 71° 29.8' W

The Tom Britton Clubhouse is open every Saturday from 7 p.m. to late evening. It is the white farmhouse on the grounds of MIT's Haystack Observatory in Westford, MA. Take Rt. 3 North from Rt. 128 or Rt. 495 to Exit 33 and proceed West on Rt. 40 for five miles. Turn right at the MIT Lincoln Lab, Haystack Observatory at the Groton town line. Proceed to the farmhouse on left side of the road. Clubhouse attendance varies with the weather. It is wise to call in advance: (978) 692-8708.

## Heads Up For The Month . . .

**To calculate Eastern Standard Time (EDT) from Universal Time (UT) subtract 5 from UT.**

Dec 3 Full Moon  
Dec 10 Last Quarter Moon (Moonrise at midnight)  
Dec 14 Geminid meteors peak, 07:00 UT (02:00 EST)  
Dec 18 New Moon  
Dec 21 Winter solstice  
Dec 22 Ursid meteors peak  
Dec 26 First Quarter Moon (Moonset at midnight)  
Dec 31 Aldebaran 0.8 deg. S. of Moon, occultation 01:00 UT